The influence of content and trust on consumers’ intention to accept mobile advertisements

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Abstract
A new model for investigating consumers’ behavioral intention in mobile advertising is developed and related to mobile marketing theory and practice. Hypotheses are tested about the hierarchical structure and the effects of the factors that precede consumers’ acceptance of mobile advertisement. The results suggest that attractive content and trust in advertisers are key predictors of mobile device users’ behavioral intention towards mobile advertising. The findings lead to a modification and extension of Fishbein's behavioral intention model and its application in the research on advertising effectiveness.

Keywords: Mobile advertisement, Behavioral intention, Consumer acceptance, Trust

1. Introduction
The growth of mobile advertising has opened a new area for research. Previously, advertising and marketing researchers paid considerable attention to consumers’ attitude toward advertisements in the major media (Homer, 1990). The research has shown that consumers now ignore advertising more than they did in previous decades. At the same time, however, Internet advertising seems to generate positive consumer attitudes (Schlosser et al., 1999) and the rapid proliferation of mobile devices has created a new channel for marketing (Tsang et al., 2004). Hence, consumers’ attitudes toward advertising in the mobile media have gained significant attention among both researchers and business practitioners (Bauer et al., 2005; Ferris, 2007; Karjaluoto and Alatalo, 2007; Lee et al., 2006; Okazaki et al. 2007).

Acceptance research has provided important insights in explaining the success of mobile advertisement (Bauer et al., 2005). This research stream has investigated a myriad of aspects that affect consumers’
attitude toward mobile marketing. These attitudes reflect the degree to which consumers identify with the advertising (MacKenzie and Lutz, 1989). Schlosser et al. (1999) reveal that mobile device users’ attitude towards mobile marketing is less resistant to change than are consumers’ attitude towards advertising in general. For example, prior research indicates that context, credibility and subjective norm are positively related to consumers’ intentions to participate in mobile marketing (Karjaluoto and Alatalo, 2007; Lee et al., 2006). However, little is known about the hierarchical structure and effects of the underlying factors that antecede consumers’ behavioral intention to accept specific mobile advertising content.

The present study examines consumers’ behavioral intentions in the context of mobile marketing. Extending the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975), the study responds to the recent call for research (e.g., Nantel and Sekhavat, 2008; Okazaki et al., 2007) on advertisement content and trust in the advertisers as the key predictors of consumers’ willingness to participate in mobile advertising. In particular, by employing PLS structural equation modeling and the composition of higher-order constructs comprising their underlying variables, the study investigates (1) the hierarchical structure; (2) the relative effects of the factors that precede consumers’ intention to accept mobile advertisement; and (3) provides evidence that validates the model and discusses whether such a conceptualization is generalizable across consumer groups.

The paper is structured as follows. After this introductory section, we offer a literature review on the theoretical foundations of the study. Moreover, we establish a research model and formulate hypotheses based on previous literature. Thereafter, we present our research design, measures, data analysis and the results. Finally, we conclude the paper by discussing the implications of the study.
2. **Theory and hypotheses**

The literature suggests that intention towards action is the best predictor of individuals’ behavior (e.g., Fishbein and Ajzen, 1975). Behavioral intention measures the strength of consumers’ conscious plans to perform the target behavior, such as consumers’ acceptance of mobile advertising. Nantel and Sekhavat (2008) argue that the content of marketing messages significantly influence the behavioral intentions evoked by mobile advertisement. They further include the concepts of credibility and trust in the advertiser as important dimensions of the source of these messages. Thus, content and trust need further investigation as the key determinants of consumers’ perception on mobile advertising.

**Advertisement content**

Mobile advertising depends upon consumers’ acceptance. Rettie et al. (2005) show that although their initial attitudes toward mobile advertising are sometimes negative, many consumers are prepared to accept advertising if the content appeals to them. Similarly, Muk (2007) reports that the relevance of the advertising message content and the perceived value of the offering are of great importance in the success of advertising via mobile devices. According to Muk (*ibid.*), this is due to that these factors have the largest impact on attitude toward advertising by reducing the perception of intrusiveness and, thus, increasing the acceptance of mobile advertisements.

Bauer et al. (2005) distinguish two kinds of acceptance drivers: perceived utility and perceived risk. Consumers will only accept mobile marketing if they perceive a benefit in receiving advertising messages on their mobile phone and if they can avoid the potential negative consequences receiving those advertisements. Moreover, Carroll et al. (2005) show that the content and its relevance to the audience are critical to the acceptance of mobile marketing. These arguments are congruent with Kaas’ (1990) claim that consumers’ perception of the advertisement is subject to its marginal utility compared to the utility that results from an alternative activity. This implies that a consumer’s attitude toward
mobile marketing will be more positive if the content has a higher perceived utility. The content of mobile advertisements consists of several dimensions: the degree of personalization, advertisement context, informativeness of the message, and entertainment value (Barwise and Strong, 2002; Bauer et al. 2005; Heinonen and Strandvik, 2007; Lee et al., 2006; Tsang et al. 2004).

**Personalization.** Bauer et al. (2005) accentuate the role of personalization in mobile marketing, arguing that a mobile phone is rarely used by anyone but its owner. Moreover, Barwise and Strong (2002) claim that consumers expect highly personalized messages, because they receive the messages through their mobile phones which they consider an intimate device. Bauer et al. (2005) emphasize that most users maintain a very personal relationship with their mobile phone, and, that the Subscriber Identity Module (SIM) card allows for the exact identification of each mobile phone and its user. Using the mobile medium for communication therefore enables the advertiser to personalize the content. Leppäniemi and Karjaluoto (2005) posit that personalization is grounded on “building customer loyalty by building a meaningful one-to-one relationship.” That is, they stress the importance of understanding the needs of each consumer, and, helping to satisfy a goal that efficiently and knowledgeably meets each consumer’s need in a given context. Hence, they define personalization in terms of individual preferences, needs, mindsets and lifestyles, and both cultural as well as geographical differences. Jingjun Xu (2006-2007) shows that personalization can enable marketers to reach their potential customers in a very individual way while improving their relationships with the existing customers. Furthermore, Jingjun Xu (2006-2007) adds personalization as an essential means of influencing consumers’ attitudes toward mobile advertising.

**Context.** Heinonen and Strandvik (2007) argue that consumers’ willingness to receive and respond to marketing communication can be viewed as a function of the content and the context of the message. They contend that any channel can and should be evaluated according to consumer responsiveness in order to understand the effects and effectiveness of communication. In conformity with this view, Muk
(2007) and Leppäniemi and Karjaluoto (2008) stress that the uniqueness of mobile advertising lies in its potential to target consumers in a specific context. In other words, mobile advertising should take into account the usefulness of information in regard to consumers’ time, location, and other contextual attributes.

**Informativeness.** Consumers’ propensity to search and use information is an important construct in the analysis and explanation of their behavior (Kroeber-Riel and Weinberg 2003). Both Ducoffe (1996) and Barwise and Strong (2002) assert that consumers prefer informative messages and the informativeness of the content of advertisements is an important predictor of their value and one that is crucial to the effectiveness of advertising. Lee et al. (2006) have studied the informativeness of mobile advertisement content in terms of its helpfulness and factuality. To investigate informativeness, they use variables such as “mobile advertisements are interesting to me” and “mobile advertisements are a great source of timely information.” Barwise and Strong (2002) suggest that highly relevant content can only be achieved from data obtained explicitly from the consumer at the time of obtaining permission, rather than by mining an existing customer database. They claim that if the messages are considered irrelevant by the target audience, there is a potential for negative reactions.

**Entertainment.** Tsang et al. (2004) and Lee et al. (2006) investigate the entertainment value of mobile advertisements through consumers’ perceived enjoyment and entertainment of mobile advertisement. For this purpose, their variables include, “receiving mobile advertisements is enjoyable and entertaining” and “receiving mobile advertisements is pleasant.” Ducoffe (1996) posits that the form, or entertainment, of the advertisement content is a vital determinant of their value and crucial to the effectiveness of advertising. Along with their entertainment value, Ducoffe (1996) states that irritation with advertisements also influences people’s attitude. This finding is consistent with earlier research (Mitchell and Olson, 1981) that interesting and pleasing advertisements have a positive impact on
consumers’ attitudes. Barwise and Strong (2002) also maintain that consumers prefer short and entertaining messages.

**Trust in the advertiser**

Consumers prefer to minimize risk rather than maximize utility. According to Bauer et al. (2005), a consumer’s subjective risk perception can thus strongly determine his or her behavior. Bauer et al. (ibid.) suggest that in the context of mobile marketing, trust should be conceptualized as consisting of two constructs, brand trust and mobile advertising trust, both of which affect users' choice to push mobile advertising. They posit that consumers are likely to accept push advertisement only when they perceive both the medium and the content to be trustworthy and non-deceptive. Attributes of trust are identified in several ways. Traditionally, the relevance and credibility of advertisements have been considered important mediators of advertising effects (MacKenzie and Lutz, 1989). Trust becomes crucial when consumers make decisions or take action on the basis of unclear information. In particular, perceived trust can be seen as a reflection of an individual’s determination of the veracity of the imparted information. However, Eastin (2001) states that it is difficult to distinguish more from less trustworthy information because much of the content of online information is not subject to governmental or ethical regulation. In the literature, the aspects of trust consist of attitude towards advertising, subjective norm, the perceived credibility of the advertiser, and consumer privacy issues (Bauer et al, 2005; Nantel and Sekhavat, 2008; Okazaki et al. 2007; Tsang et al. 2004).

**Attitude.** Bauer et al. (2005) posit that the more positive one’s attitude toward advertising in general the more positive his or her attitude toward mobile marketing. Zanot (1984) reveals that attitudes toward advertising in the major media became increasingly negative after the 1970s. Internet advertising, however, seems to generate positive consumer attitudes (Schlosser et al., 1999). Karjaluoto and Alatalo (2007) show that the more favorable the consumers’ attitude towards mobile marketing, the higher their
intention to participate in mobile marketing. Jun and Lee (2007) add that advertising attitudes are positively related with consumers’ past behavioral experience. This study considers the experience-based attitude as an important antecedent of trust in the advertisers.

Subjective norm. The theory of reasoned action suggests that subjective norm, i.e. social influence, affects a person’s intention to perform a behavior. It is defined as the person's perception that people think that they should or should not perform the behavior in question (Ajzen 1991; Davis et al. 1989; Fishbein and Azjen 1975). According to Ajzen and Fishbein (1980), subjective norm is a function of the product of one’s normative belief and motivation. It is the person’s belief that the salient referent thinks he/she should (or should not) perform the behavior and his/her motivation to comply with that referent. In the information systems research, the effect of subjective norm is shown to be more salient for consumers with little or no experience (Venkatesh et al., 2003). Thus, subjective norm may be considered influential in the emergence of trust.

Credibility. The term “credibility” is used to refer to the traits of the communicator (whether an individual or a company). It includes expertise, trustworthiness, attractiveness, and power (Lee et al., 2006). Mackenzie and Lutz (1989) and Drossos et al. (2007) show that credibility strongly influences a consumer’s attitude toward the advertiser, which in turn is an important predictor of the consumer’s behavioral intention toward the advertisement. Sternthal et al. (1978) noted that a source with high credibility has a greater power of persuasion than a source with low credibility. Furthermore, Choi and Rifon (2002) define the credibility of the advertiser as "the extent to which consumers believe that a firm can design and deliver products and services that satisfy customer needs and wants.” Moreover, Nantel and Sekhavat (2008) point out that credibility of a source is connected with its power to inspire trust in the advertiser.
Privacy. The perceived risk of losing one’s privacy is also related to a consumer’s trust in the advertiser. The risk associated with mobile marketing is mainly perceived as one of data security. The conception of privacy is vital in mobile advertising; Bauer et al. (2005) emphasize that new media service users tend to have concerns about data manipulation, unauthorized data access, and unwanted tracking of usage patterns. According to Bauer et al. (2005), another security issue is the protection of consumers’ privacy. By using the mobile medium it is possible for marketers to reach consumers at any time and in any place. This characteristic provides the basis for high-potential, personalized mobile marketing on one hand, but also accounts for consumers’ fear of privacy violations on the other. In addition, Rappaport (2007) cites the urgency of treating consumers' personal information with integrity. According to him, this concern is framed in terms like the "privacy issue" as an essential foundation for brand-consumer relationships and brand demand. It pertains to consumers’ belief that advertisers are reputable and responsible, and that they will treat consumers' personal information with care.

The Theory of Reasoned Action in mobile advertising

The purpose of the Theory of Reasoned Action (TRA) is to predict and understand the factors influencing an individual’s behavior in a specific context. Originating in social psychology, it was developed by Fishbein and Azjen (1975). The theory and its subsequent variation, the Theory of Planned Behavior (TPB), have been applied to research in a variety of fields. TRA provides a theoretical foundation for the linkage among four constructs: behavior, intention, attitude, and belief. Through exposure to an object, people link the object with its attributes in varying strengths. Its premise is that the totality of a person’s belief is the informational base that ultimately determines his or her attitudes, intentions, and behaviors (Fishbein and Ajzen, 1975).

Bauer et al. (2005) show that the TRA is a means of measuring consumers’ acceptance of mobile advertisements. According to their study, acceptance should be forecasted by measuring an individual’s
intention to accept. As such, it is of major relevance to both theory and practice to develop a model for testing mobile marketing acceptance. The basic assumption of Ajzen and Fishbein’s theory is that individuals consciously decide to perform or not to perform a specific behavior. In this, they consider and evaluate various criteria pertaining to the behavior before actually performing it. Therefore, for a reliable forecast of the acceptance of mobile marketing, it is necessary to examine the combination of acceptance and use decisions.

The fundamental proposition of the TRA is that behavior (B) is determined by behavioral intention (BI). The behavioral intention is in turn postulated to be a function of the individual’s attitude toward the act (A act) and toward social norms (SN). Whether the attitude toward the act or the social norms exerts the greater influence on the behavioral intention depends on the individual and the decision object (Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975). This relationship is originally written as:

\[
B \sim BI = A_{act} w_1 + SN w_2
\]

The parameters \(w_1\) and \(w_2\) are empirically determined standardized regression coefficients (Fishbein and Ajzen, 1975), each reflecting the strength of the relative impact of the attitude toward the act and the social norms on the behavioral intention. However, prior literature on the acceptance of mobile advertisement (e.g., Gopal and Tripathi, 2006) argues that the perceived content of the advertisement is important in an individual’s decision to accept the advertisement (e.g., Ferris, 2007). Moreover, both the effect of \(A_{act}\) and SN on the behavioral intention (BI), and, ultimately, to the acceptance of mobile advertisement (B), are mediated by trust in the advertiser. Furthermore, trust is associated with other variables such as credibility (MacKenzie and Lutz, 1989; Okazaki et al., 2007) and privacy (Rappaport, 2007). Therefore, in the context of a consumer’s acceptance of mobile advertisement, this relationship can be restated as:

\[
B \sim BI_{acc} = w_1 CTN + w_2 TRU,
\]
where behavior \((B)\) is a reflection of a consumer’s intention to accept advertisements \((BI_{acc})\), which in turn, is subject to the consumer’s perception of the content \((CTN)\), and, beliefs about its consequences \((C_i)\) and the evaluation of those consequences \((E_i)\). That is:

\[
\sum_{i=1}^{n} CTN = C_i \times E_i, \text{ where } i = \text{number of consequences.}
\]

Furthermore, the second level of explanation (specified above) includes the effect of trust \((TRU)\), which is subject to the individual’s perception of the consequences of trusting the advertiser. This can be written as:

\[
\sum_{i=1}^{n} TRU = C_i \times E_i, \text{ where } i = \text{number of consequences.}
\]

Measuring the second level constructs, i.e., “perceived advertisement content” \((CTN)\) and “perceived trust in advertisers” \((TRU)\) will therefore be sufficient for this study. On the basis of these considerations the following hypotheses are formulated:

**H1:** Perceived advertisement content \((CTN)\) has a direct positive effect on consumers’ behavioral intention to accept \((BI_{acc})\) mobile advertisements.

**H2:** Perceived trust in advertisers \((TRU)\) has a direct positive effect on consumers’ behavioral intention to accept \((BI_{acc})\) mobile advertisements.

### 3. Methodology and data

An online survey to test the hypotheses was conducted in 2007. The empirical inquiry was carried out among European mobile phone users hailing from Finland and the Netherlands. Using the competitiveness indicators, Finland and the Netherlands are the leading European information societies in the benchmark analysis of EU-15 countries (Ahokas and Kaivo-oja, 2003). Furthermore, according to the European Commission’s Information Society and Media reports (2008a; 2008b), in 2007 the
mobile penetration rate in Finland exceeded 108% and in the Netherlands 111%. Thus, mobile market profiles in these two countries are highly similar, making them a feasible sampling frame. Moreover, these countries have high broadband penetration rates (over 34%), and thus, they attractive markets for mobile advertisers.

Respondents were recruited via an e-mail in which an invitation and a link to the survey were included in the message body. The total sample size consisted of 420 potential respondents and the questionnaire yielded 103 usable responses for analysis. Thus, the response rate equals 24.5% which is considered acceptable. Respondents’ demographic information was collected for control purposes. The sample comprised 68% males and 32% females. The average age of the respondents was 32, with the youngest respondent being 21 and the oldest 63 years old. Overall, over 75% of the respondents were younger than 39 years old and more than half (51.5%) were younger than 30 years old. Most respondents had been exposed to mobile advertising; 79% of them had previously received mobile advertisements and 21% had not.

Multi-item scales were used to measure all constructs. The survey explored user experience, attributes of mobile advertising, and the consumer’s intention to accept mobile advertising. All items were measured on a five-point Likert-type scale (1=”strongly disagree” to 5=”strongly agree”). The items were drawn from the literature, but the wording of the questionnaire was slightly modified in order to fit this context of mobile advertising (see Appendix 1 for the list of surveyed items).

**Scale validity and reliability**

To avoid the standard assumptions of multinormality and the necessity of a large sample size, Wold’s (1982) method of partial least squares (PLS) was used for parameters estimation. To assess the reliability and validity of the constructs, composite reliability values ($\rho_c$) and average variance
extracted values ($\rho_v$) were examined for each first-order latent variable. Construct reliability was assessed using composite reliability analysis as suggested by Fornell and Larcker (1981). Following Chin et al. (2003), it can be written using the calculation formula:

$$
\rho_c = \frac{\left( \sum \lambda_i \right)^2 \text{var} F}{\left( \sum \lambda_i \right)^2 \text{var} F + \sum \Theta_{ii}}.
$$

All composite reliability values were above the recommended level of .70 (Fornell and Larcker, 1981). A complementary measure to composite reliability is the average variance extracted, which is useful in examining convergent validity. Average variance extracted is the average variance shared between a construct and its measures (Hulland, 1999) and the equation is defined as:

$$
\rho_v = \frac{\left( \sum \lambda_{yi} \right)^2}{\left( \sum \lambda_{yi} \right)^2 + \sum \text{var}(\varepsilon_i)}.
$$

It shows directly the amount of variance captured by the construct in relation to the variance due to measurement error. In our study, all constructs exceeded the recommended .50 benchmark (Diamantopoulos and Siguaw, 2000) except the second-order construct TRU, which, however, had an acceptable value of .46. Overall, the composite reliability values and average variance extracted values indicate that the scales perform adequately. In addition to these two measures, Table 1 shows the means, standard deviations, Cronbach’s alphas for internal consistency, and correlations for the constructs.

**Second-order constructs**

PLS enables scholars to investigate models at a higher level of abstraction (Lohmöller, 1989) which is useful in estimating complex models (Chin, 1998). For this purpose, Wold (1982) suggests the use of repeated indicators (i.e., the hierarchical component model) for measuring second-order constructs. That is, all indicators of the first-order constructs are reassigned to the second-order construct, as
second-order models are a special type of PLS path modeling that uses manifest variables twice for model estimation. According to Hulland (1999), the researcher needs to decide whether it is more correct to think of the underlying construct as causing the observed measures (i.e., a reflective relationship) or of the measures as causing or defining the construct (i.e., a formative relationship). However, a prerequisite for the repeated indicators approach is that all indicators of the first-order and the second-order factors should be reflective. According to Jarvis et al. (2003), such a model is called a total disaggregation second-order factor model. It has a series of first-order latent factors with reflective indicators. These first-order factors are themselves reflective indicators of an underlying second-order construct. Moreover, the second order latent variable should be used as exogenous variable, because its variance is explained by its indicators and, otherwise, the specification of an additional source of variation (i.e., an antecedent construct) would be conceptually questionable (Diamantopoulos et al., 2008). Thus, all items included in our PLS analysis were configured as reflective indicators (Fornell and Larcker, 1981; Haenlein and Kaplan, 2004) and the second-order constructs CTN and TRU are considered exogenous variables. Reflective indicators are expressed as a function of their associated latent variables by using matrix algebra as suggested by Haenlein and Kaplan (2004):

\[ y = \Lambda_y \eta + \varepsilon , \]

where \( \Lambda_y \) = loadings of indicators of endogenous variables, \( \eta \) = latent endogenous variable, and \( \varepsilon \) = measurement errors for indicators of endogenous variable.

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<th>Construct</th>
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**Note:** SD = standard deviation; \( \rho_v \) = average variance extracted; \( \rho_c \) = composite reliability; Cronbach’s alpha (\( \alpha \)) = \( \frac{\left( \sum_{h \neq h'} \text{cov}(x_h, x_{h'}) / \text{var}(\sum x_h) \right)}{p(p-1)} \) (Tenenhaus et al., 2005); square root of \( \rho_v \) on diagonal (in parentheses).

Discriminant validity was assessed by examining the correlation matrix of the constructs. According to Fornell and Larcker (1981), satisfactory discriminant validity among constructs is obtained when the square root of the average variance extracted is greater than corresponding construct correlations. This implies that the variance shared between any two constructs is less than the variance shared between a construct and its indicators. For each pair of constructs, the square root of the average variance extracted exceeded their correlations, thus supporting the discriminant validity of the constructs.

### 4. Empirical analysis and results

Hypotheses were tested using the SmartPLS 2.0 developed by Ringle et al. (2005). PLS path modeling is a component-based SEM approach that does not require multivariate normal data and places minimum requirements on measurement levels (Hulland 1999; Tenenhaus et al. 2005). Moreover, the use of the PLS method is typically recommended in situations in which the sample size is small (Haenlein and Kaplan, 2004). The sample size in the present study is 103, thus supporting the use of PLS. In addition, PLS is viable for analyzing predictive research models that are in the early stages of theory development (Barclay et al., 1995), as is the model in the present study. Because PLS considers all path coefficients simultaneously and estimates multiple individual item loadings in the context of a theoretically specified model rather than in isolation, it helps to avoid biased and inconsistent parameter estimates for equations.

Both hypotheses were examined with full-sample using t-tests (df=188). First, PLS generates estimates of standardized regression coefficients for the paths in a structural equation model. Then, the bootstrap
procedure approximates the sampling distribution of an estimator by resampling with replacement from the original sample, which is necessary to derive valid t-values. The analysis was conveyed using 500 bootstrap replications as suggested by Chin et al. (2003). Structural equation model and the results of the analysis are shown in Figure 1.

![Structural equation model of the study](image)

**Figure 1 Structural equation model of the study**

The explanatory power of the model for the dependent construct was measured by using the squared multiple correlations value ($R^2$). As PLS does not provide overall fit indexes for the model, Hulland (1999) suggests that researchers report $R^2$ values for all endogenous constructs included in their
models. In the present study, the independent constructs explained 57% of the variance in intention to accept mobile advertisements, which is considered good for this kind of analysis.

PLS path modeling includes no proper single goodness-of-fit measure. However, to conclude our structural analysis, we calculate the goodness of fit (GoF) of the model using Tenenhaus et al.’s (2005) global fit measure for PLS. By taking the square root of the product of the variance extracted of all constructs with multiple indicators and the average $R^2$ value of the endogenous constructs, we can calculate a fit measure ranging between 0 and 1. The measure was calculated using the second-order constructs and the dependent construct. According to the categorization by Cohen (1988) and using .50 as a cut-off value for communality (Fornell and Larcker, 1981), the GoF criteria for small, medium, and large effect sizes are .10, .25, and .36. In our model, the GoF is .59, which indicates a good fit of the model to the data.

Table 2 lists the results for the hypotheses. As hypothesized, the perceived advertisement content ($CTN$) has significant positive effect on consumers’ behavioral intention to accept ($BI_{Acc}$) mobile advertisements ($\beta=.48, p<.001$), thus supporting Hypothesis 1. Moreover, perceived trust in advertisers ($TRU$) has significant positive effect on consumers’ behavioral intention to accept ($BI_{Acc}$) mobile advertisements ($\beta=.32, p<.05$), thus supporting Hypothesis 2. In general, these findings support the arguments that both the content and trust are important predictors of consumers’ acceptance of mobile advertising.
5. Discussion and Conclusion

Our study contributes to the literatures on social psychology and consumer marketing by extending the scope of application of the Theory of Reasoned Action (TRA) to the field of mobile advertising. The findings suggest that TRA is applicable in predicting consumers’ behavioral intention to accept mobile advertisements. The results underline the importance of appealing content and trust in the advertisers in the consumers’ behavioral intention to accept marketing messages. According to Bauer et al. (2005), the communication of advertising content over mobile media can only be effective if consumers permit the continuous reception of advertising messages on their mobile devices.

The findings are congruent with Heinonen and Strandvik (2007) and Carroll et al. (2005), who suggest that the acceptance of a mobile marketing message is likely to be influenced by the consumer’s acceptance of the mobile medium, the relevance of the content and the context of the marketing communication. According to their findings, messages that are concise, funny, interactive, entertaining and relevant to the target group usually achieve higher levels of success. The present study improves the understanding of marketers’ persuasive options. It provides evidence of the underlying dimensions that are relevant in designing content of mobile advertisements, and, in increasing consumers’ trust in mobile advertisers.

These results are relevant for both scholars and business practitioners interested in how mobile advertising works. For scholars, the study provides sheds light on the dimensions of consumers’ behavioral intention by showing that content and trust are multifaceted constructs that are products of a number of underlying attributes. The present study provides theoretical and methodological grounds for classifying these underpinnings. For mobile advertisers, our findings highlight the importance of focusing the type of content in terms of personalization and context-specificity and the function of the message’s information and entertainment value. In addition, the study underlines the significance of
encouraging trust in terms of personal and social dimensions, and consumers’ perception of the advertiser’s credibility and the protection or safety of their private information.

Although the present study provides solid evidence of the roles of content and trust in consumer behavior, it is not free from limitations. As our sample consisted of only 103 respondents, caution needs to be exercised in generalizing the results. Moreover, the established higher-order constructs should be validated though other empirical methods and larger sample sizes. In addition, our data includes demographic control variables, but the empirical analysis did not consider possible differences among consumer groups in terms of age, gender, cultural background, and other characteristics.

References


## Appendix 1. List of original items

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Loading</th>
<th>Weight</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Context</strong></td>
<td>COT1</td>
<td>.95</td>
<td>.55</td>
<td>I consider mobile advertising related to a specific time or date useful</td>
</tr>
<tr>
<td></td>
<td>COT2</td>
<td>.94</td>
<td>.51</td>
<td>I consider mobile advertising related to me being in a specific location useful</td>
</tr>
<tr>
<td><strong>Entertainment</strong></td>
<td>ENT1</td>
<td>.95</td>
<td>.52</td>
<td>I feel that receiving mobile advertisements is pleasant</td>
</tr>
<tr>
<td></td>
<td>ENT2</td>
<td>.95</td>
<td>.53</td>
<td>I feel that receiving mobile advertisements is enjoyable and entertaining</td>
</tr>
<tr>
<td><strong>Personalization</strong></td>
<td>PER1</td>
<td>.95</td>
<td>.61</td>
<td>I feel that mobile advertising is personalized for my usage</td>
</tr>
<tr>
<td></td>
<td>PER2</td>
<td>.91</td>
<td>.47</td>
<td>Contents in mobile advertisements are personalized</td>
</tr>
<tr>
<td><strong>Intention</strong></td>
<td>INT1</td>
<td>.93</td>
<td>.41</td>
<td>I am willing to receive mobile advertising in the future</td>
</tr>
<tr>
<td></td>
<td>INT2</td>
<td>.93</td>
<td>.38</td>
<td>I intend to opt-in to receiving mobile advertising within the next six months if I have the opportunity to do so</td>
</tr>
<tr>
<td></td>
<td>INT3</td>
<td>.85</td>
<td>.32</td>
<td>I intend to opt-in to receiving mobile advertising whenever I have a chance</td>
</tr>
<tr>
<td><strong>Attitude</strong></td>
<td>ATT1</td>
<td>.92</td>
<td>.56</td>
<td>Overall, I like the idea of using mobile advertising</td>
</tr>
<tr>
<td></td>
<td>ATT2</td>
<td>.91</td>
<td>.53</td>
<td>I believe that mobile advertising can benefit both the marketing company and me</td>
</tr>
<tr>
<td><strong>Credibility</strong></td>
<td>CRE1</td>
<td>.93</td>
<td>.53</td>
<td>I feel that mobile advertisements are credible</td>
</tr>
<tr>
<td></td>
<td>CRE2</td>
<td>.94</td>
<td>.54</td>
<td>The content provided by mobile advertising is credible</td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td>PRI1</td>
<td>.95</td>
<td>.56</td>
<td>I believe that a marketing company uses my data only for a purpose that I have approved</td>
</tr>
<tr>
<td></td>
<td>PRI2</td>
<td>.94</td>
<td>.49</td>
<td>I believe that my mobile operator uses my data only for a purpose that I have approved</td>
</tr>
<tr>
<td><strong>Informativeness</strong></td>
<td>INF1</td>
<td>.85</td>
<td>.50</td>
<td>Mobile advertisements provide the information I need</td>
</tr>
<tr>
<td></td>
<td>INF2</td>
<td>.91</td>
<td>.63</td>
<td>I feel that mobile advertising is a good source for timely information</td>
</tr>
<tr>
<td><strong>Subjective norm</strong></td>
<td>SUB1</td>
<td>.93</td>
<td>.49</td>
<td>I am more likely to participate in mobile marketing if the message is forwarded to me by someone I know</td>
</tr>
<tr>
<td></td>
<td>SUB2</td>
<td>.95</td>
<td>.58</td>
<td>I am more likely to participate in mobile advertising if it is recommended by someone I know</td>
</tr>
</tbody>
</table>

Notes: *The response options ranged from 1 = “totally disagree” to 5 = “totally agree”*